1350.0 - Australian Economic Indicators, Oct 2002

ARCHIVED ISSUE Released at 11:30 AM (CANBERRA TIME) 30/09/2002

Feature Article - New Experimental Estimates of the Distribution of Australian Household Wealth (Oct, 2002)

This article was published in Australian Economic Indicators (ABS Cat. No. 1350.0), October 2002

INTRODUCTION

There is considerable interest in the composition and distribution of wealth across Australian households, and how this is changing over time. This article reports some of the findings of an exploratory study into this topic.

An ABS Working Paper 'Experimental Estimates of the Distribution of Household Wealth, Australia, 1994-2000' was released for comment today (30 September 2002). This working paper reports the findings of an exploratory study which has melded a range of existing data sets to construct experimental wealth data dissected by key household characteristics. The paper focuses on the data and methods used to generate the estimates, and presents some broad results which have emerged from the data modelling work.

The working paper series provides an avenue for the ABS to make public the results of research or analysis of an experimental nature, so as to encourage discussion, comment and improvement of the exploratory work. Feedback on the methods and results reported in the new wealth working paper is therefore welcomed.

BACKGROUND

The ABS first collected distributional wealth data from households as part of the 1915 War Census, but due to concerns about the public's willingness to respond to questions about their wealth, and due to competing data collection priorities within the ABS' work program, such statistics have not been collected in ABS household surveys or censuses for several decades.

In recent years the ABS has committed increased effort to the analysis of directly collected and administrative data. The purpose of this work is to gain more value from existing data, to reduce the load on data providers and to increase the comparability of statistics from different parts of the Australian statistical framework. As part of this effort, research was undertaken to identify the existing data sets relating to wealth and to explore methodologies for bringing these together to produce wealth estimates. An analytical project was subsequently initiated to construct a set of distributional household wealth estimates for Australia for most of the last decade, using existing data.

This was not the first time that the distribution of wealth has been modelled in Australia. Dilnot (1990), Bacon (1996), Baekgaard and King (1996), Kelly (2001) and others have undertaken similar types of analyses. However, most previous studies have concentrated on a selection of

the assets and liabilities owned by households, and have compiled estimates for a particular point (or a selection of points) in time. In addition, the ABS has extended the work of other analysts using more detailed survey unit record information to support the analyses.

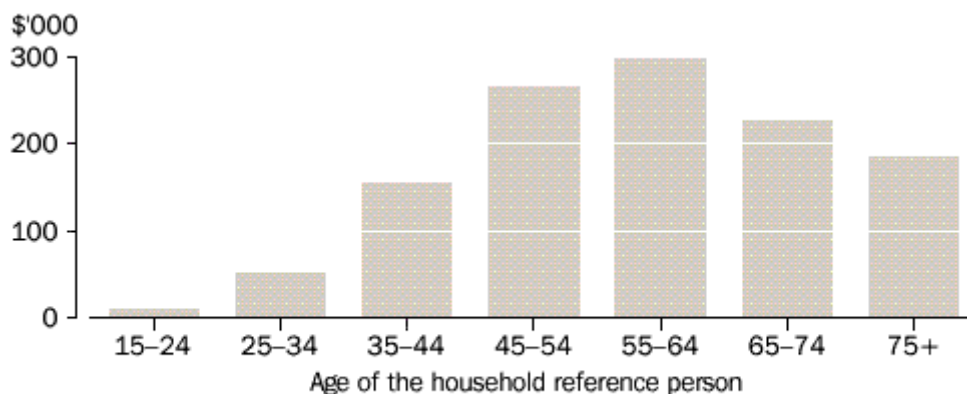## HOW THE EXPERIMENTAL ESTIMATES WERE COMPILED

The experimental estimates discussed in the working paper are constructed very differently to those which the ABS obtains via direct collections (i.e. via surveys or censuses). The new experimental estimates have been created by drawing together a range of different data sources, covering different parts of the Australian population which have been collected at different times. They have been modelled rather than directly measured.

For this study, a household's wealth was defined to equal its net worth - that is, the sum of its assets minus the sum of its liabilities. Using a variety of data sources, individual asset and liability estimates were constructed for each household represented in the Surveys of Income and Housing Costs (SIHC) and Household Expenditure Surveys (HES) covering the financial years 1993-1994 to 1999-2000. These household-level estimates were aggregated and benchmarked to the current price asset category aggregates reported in the National Accounts household sector balance sheet (adjusted to exclude non-profit institutions). The data generated by this process allow the assets, liabilities and net worth of households to be dissected by key characteristics such as household type (based on the composition of the household and the ages of the people within it), broad geography, income deciles and so on.

THE DISTRIBUTION OF HOUSEHOLD WEALTH - EXPLORATORY FINDINGS

For each year from 1994 to 2000, mean and median household wealth increased as the age of the household reference person[1] increased, peaked in the 55-64 age group and then declined. This pattern supports the theory that households build their wealth while householders are working, and then draw upon this wealth in retirement. This pattern is different to the distribution of total income across age groups, which peaks in the 45-59 age group and then falls away more rapidly.

MEDIAN HOUSEHOLD NET WORTH,
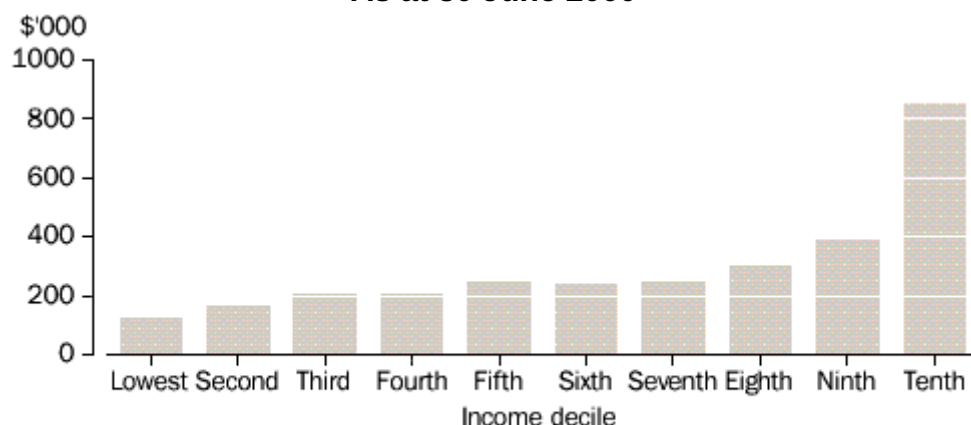### BY THE AGE OF THE HOUSEHOLD REFERENCE PERSON-
As at 30 June 2000

Source: ABS, Experimental Estimates of the Distribution of Household Wealth, Australia, 1994–2000

The distribution of wealth in all dimensions is closely related to the distribution of major household assets such as owner-occupied dwellings and superannuation. Growth in the value of

these assets between 1994 and 2000 has led to strong increases in the average wealth of households in middle and older age groups (i.e. those where the age of the reference person is over 44).

The distribution of wealth is also related to income levels. Mean and median wealth rises across most income deciles. Mean wealth for the highest income decile is more than double that of the ninth decile.

AVERAGE HOUSEHOLD NET WORTH BY ANNUAL INCOME DECILE,
As at 30 June 2000

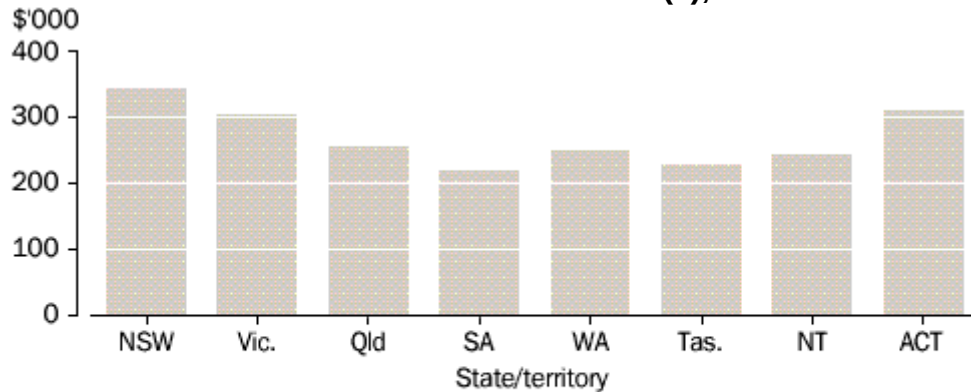Source: ABS, Experimental Estimates of the Distribution of Household Wealth, Australia, 1994–2000

The distribution of wealth between different types of households is closely linked to the effects of age and income level on wealth accumulation. Couple households had higher average net worth than lone parent or lone person households with reference people of a similar age. This is to be expected, as couples may have had access to two incomes with which to accumulate assets.

TABLE 1. MEAN AND MEDIAN HOUSEHOLD NET WORTH BY SELECTED HOUSEHOLD TYPES, CURRENT PRICES, AS AT 30 JUNE 2000

	Couple				Lone parent with dependants		Lone person only
	Without dependants	With dependants					
		0-14 only	15-24 only	0-14 and 15-24 only	0-14 only	15-24 only	
	$	$	$	$	$	$	$
Mean household net worth	385,853	258,786	588,268	397,265	55,019	178,128	209,287
Median household net worth	243,912	153,477	392,106	277,439	16,449	100,174	111,014

Mean net worth grew in all states and territories between 1994 and 2000. In 2000, mean net worth was highest in NSW, where average owner-occupied dwelling values were considerably higher than those in other states. The distribution of wealth between states and territories was different from the distribution of mean annual income, as the territories had higher mean and median household incomes than the states.

MEAN HOUSEHOLD NET WORTH BY STATE (a), As at 30 June 2000

(a) Estimates for smaller states/territories (particularly the Northern Territory) are based on relatively small sample sizes and should be used with some caution.

Source: ABS, *Experimental Estimates of the Distribution of Household Wealth, Australia, 1994–2000*

The percentage of total wealth owned by households in a particular wealth decile is a statistic which is commonly used to examine the concentration of wealth across households. From 1995 to 2000, the amount of wealth held by the top wealth decile appears to have been quite stable - either 43% or 44% in each year, after falling from 49% in 1994. The percentage of total household wealth owned by other wealth deciles has also remained stable over this period. The distributional patterns outlined above are in broad agreement with data from other sources and the findings of previous studies. However, mean household net worth estimates from the new experimental model are higher than some estimates which have been reported in the past. When interpreting these types of differences it should be remembered that these new experimental estimates incorporate some assets and liabilities which have not often been included in past analyses, the estimates have been benchmarked to National Accounts aggregates, and they have been based on more detailed survey information.

CONTENTS OF THE WORKING PAPER

Tabulations of mean and median household net worth dissected by a range of characteristics (age of reference person, household type, state and income and wealth deciles) are presented in the appendices of the working paper. However, the main focus of the publication is to document, in some detail, the data and methods used to construct the wealth model, and provide:

- an illustration of the types of analyses which can be performed on the experimental estimates produced by the model;
- a range of quality indicators to assist potential users of the estimates to gain insights into their fitness for specific purposes. While broad dissections of the experimental data will generally yield robust results, users of the estimates should only undertake more detailed dissections with caution; and
- sufficient detail so that other analysts may provide feedback to the ABS about the methods used in this exploratory work.

POSSIBLE FUTURE WORK

There are a number of ways in which the experimental estimates could be refined in the future. For example, work is underway to increase the comparability of income statistics which were collected in the SIHC and HES across the 1990s, and this may lead to revised income data to which the model can be applied. (For further details of this work, see the feature article

'Upgrading Household Income Distribution Statistics' in the April 2002 edition of this publication).

The ABS is investigating the feasibility of compiling standard errors or alternative deviation measures, using statistical modelling techniques, to enhance the suite of quality indicators which has been provided in the working paper.

After considering feedback on the methods and experimental results reported in the working paper (and subject to further investigation of the feasibility of refinements to the model) the ABS may make more detailed disaggregations of the estimates available. In addition, the descriptive analysis conducted to date is only a fraction of that which could be undertaken using the estimates compiled in this study. Other analyses are being considered for incorporation into the ABS' analytical work program.

Using the model which has been developed in this study, the ABS may compile distributional wealth data in years when a SIHC or equivalent survey is run, i.e. biennially, from 2003-2004. Information on wealth is planned to be directly collected every sixth year, commencing with the 2003-2004 Household Income and Expenditure Survey (a combined SIHC and HES).

FURTHER INFORMATION

'Experimental Estimates of The Distribution of Household Wealth, Australia, 1994-2000', can be found on the ABS web site, and downloaded free of charge. For further information about the methods used to model the distribution of wealth, please contact Kristen Northwood on (02) 9268 4238, email **kristen.northwood@abs.gov.au**, or contact Ken Tallis on (02) 6252 7290, email **ken.tallis@abs.gov.au**. For further information about ABS income distribution statistics and plans to directly survey household wealth in the future, please contact Leon Pietsch on (02) 6252 6098 or email **leon.pietsch@abs.gov.au.**

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FOOTNOTES

1 The reference person is selected from the adults in the household's primary family, using data on relationships, gender, income and age. Further details of the rules by which this person is

selected are provided in the working paper.

This page last updated 8 December 2006